MITSUBISHI MOTOR SALES OF AMERICA, Inc.

TECHNICAL SERVICE BULLETIN

SUBJECT: **ENGINE BLOCK HEATER APPLICATION AND INSTALLATION**

NO. TSB-96-11-003
DATE March, 1996
MODEL All

CIRCULATE TO:
☐ GENERAL MANAGER ☑ PARTS MANAGER ☑ TECHNICIAN
☑ SERVICE ADVISOR ☑ SERVICE MANAGER ☐ WARRANTY PROCESSOR ☐ SALES MANAGER

This technical service bulletin updates and supersedes TSB-94-11-001, issued 3/94. Changes include updated vehicle application and revised block heater installation position direction.

PURPOSE

This bulletin provides specific vehicle application and a general introduction to engine block heaters. A block heater application chart is shown on page 3. While most vehicles are operated in climates that do not require block heaters, the information in this bulletin can serve as a basic introduction to the availability and usage of block heaters.

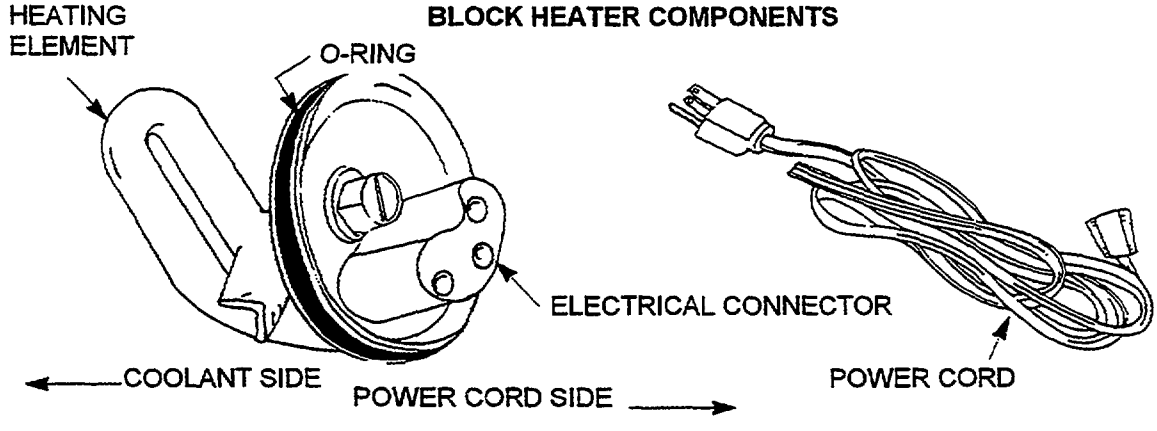
GENERAL DESCRIPTION

Engine block heaters are used to maintain coolant fluidity inside the engine's coolant passages. Coolant fluidity is a factor when vehicles are parked in extremely cold areas (0° F, or less) for extended periods of time, such as overnight. The block heater consists of a heating element, O-ring, electrical connector, and power cord.

The block heater is the same shape and diameter as the engine's core plugs and permanently replaces a designated core plug. See page 3 of this bulletin for block heater part number, application information, and proper core plug location and position.

To operate the block heater, attach the power cord to the block heater electrical connector and route it safely inside the engine compartment. Plug the male end of the power cord into a standard 120 VAC household electrical outlet. When operated overnight, the block heater helps prevent engine fluids from thickening and/or freezing, allowing the engine to start and run normally in very cold ambient (outside) temperature.

BLOCK HEATER COMPONENTS



Continued

Index # 046200

SERVICE TIPS

In addition to the instructions supplied with each block heater, refer to the following service tips for installing and using block heaters.

WARNING!: To avoid personal injury, be sure to safely release cooling system pressure and drain the coolant before installing a block heater.

1. Locate the proper core plug location, and remove that core plug. Do not attempt to install the block heater in a non-specified core plug location. Use the core plug locations diagram below to determine the correct installation point.

2. Before installing the block heater, lubricate the O-ring with clean engine coolant. Do not use any other lubricants or sealants as they can damage the heater and cause leakage.

3. Be sure to insert the block heater with the heating element pointed in the proper direction as indicated for each specific engine on the application chart on page 3.

4. Tighten the block heater screw to the exact torque specified in the installation instructions.

5. After firmly attaching the power cord to the block heater, route the cord away from hot and/or moving parts inside the engine compartment.

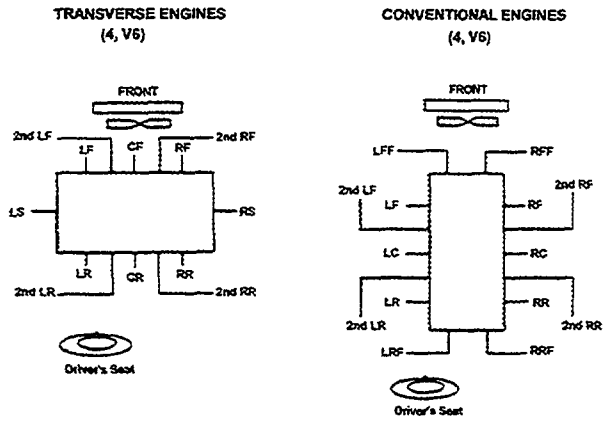
6. Fill the cooling system with a clean, properly mixed ratio (normally 50/50) of coolant and water.

7. Do not operate the block heater unless the cooling system is filled to the roper level. If the heating element is allowed to operate while not immersed in coolant, it will quickly burn out.

8. After the block heater is installed, do not use additives designed to prevent cooling system leaks. These additives will damage the heating element.

ENGINE CORE PLUG LOCATIONS

Use the following illustrations along with the chart on page 3 to identify engine core plug locations and block heater installation positions for the various Mitsubishi engines.



CORE PLUG LOCATION DIAGRAM

Location of heater (from driver's seat)

CF	- Center Front
CR	- Center Rear
LC	- Left Center
LF	- Left Front
2nd LF	- 2nd Left Front
LFF	- Left Front Face
LR	- Left Rear
2nd LR	- 2nd Left Rear
LRF	- Left Rear Face
LS	- Left Side
RC	- Right Center
RF	- Right Front
2nd RF	- 2nd Right Front
RFF	- Right Front Face
RR	- Right Rear
2nd RR	- 2nd Right Rear
RRF	- Right Rear Face
RS	- Right Side

Continued

ENGINE BLOCK HEATER APPLICATION, LOCATION, AND POSITIONING CHART

Use the following chart, along with the core plug location chart on page 2, to identify the correct block heater kit, installation location, and positioning direction for most vehicles sold by Mitsubishi Motor Sales of America, Inc.

MODEL	ENGINE	HEATER P/N	LOCATION	ELEMENT POSITION
Expo & LRV	2.4L 4G64	A993FH1X01	LR/2nd LR*	3 o'clock
Expo LRV	1.8L 4G93	A992FH1X01	RF	3 o'clock
Diamante & Diamante Wagon	3.0L 6G72	AMR4FH1X01	RF	9 o'clock
3000GT & Spyder	3.0L 6G72	A991FH1X01	LRH***	N/A
Mirage (All)	1.5L G15B	A993FH1X01	2nd LR	9 o'clock
Mirage ('89 –'92)	1.6L 4G61	A993FH1X01	2nd LR	4 o'clock
Mirage ('93 –'96)	1.8L 4G93	A992FH1X01	RF	3 o'clock
Galant ('89 –'93)	2.0L 4G63	A993FH1X01	LR	3 o'clock
Galant ('94 –'96 SOHC)	2.4L 4G64	A993FH1X01	LR/2nd LR*	3 o'clock
Galant ('94 DOHC)	2.4L 4G64	A992FH1X01	RF	3 o'clock
Eclipse (All)	1.8L 4G37	A993FH1X01	RF****	12 o'clock
Eclipse (All)	2.0L 4G63	A991FH1X01	LRH***	N/A
Eclipse ('95 –'96 non-turbo)	2.0L 420A	A993FH1X01	2nd LR	9 o'clock
Sigma (All)	3.0L 6G72	AMR4FH1X01	RF	9 o'clock
Montero ('83 –'91)	2.6L G54B	A991FH1X03	RF	6 o'clock
Montero (All)	3.0L 6G72	AMR4FH1X01	RR	9 o'clock
Montero ('95 –'96)	3.5L 6G74	AMR4FH1X01	RR	9 o'clock
Trucks ('83 –'89)	2.0L G63B	A993FH1X01	RR	3 o'clock
Trucks ('89 –'96)	2.4L 4G64	A993FH1X01	RR	3 o'clock
Trucks (All)	T.D. 4D55	A991FH1X03**	LR	9 o'clock
Trucks (All)	2.6L G54B	A991FH1X03	RF	6 o'clock
Trucks (All)	3.0L 6G72	AMR4FH1X01	RR	9 o'clock
Van Wagon (All)	2.4L G64B	A993FH1X01	RR	3 o'clock

* **4G64 Block only:** If the LR core plug hole is 40mm, install A993FH1X01 in 2nd LR

** **Turbo Diesel:** Part supersedes MD065890 - replacement part only

*** **LRH:** Lower Radiator Hose

**** **Requires Removal of Exhaust Manifold**

Part Number	Core Hole Diameter
A993FH1X01 & A992FH1X01	35 mm
A991FH1X03	40 mm
A991FH1X01	1.5 inch Hose Heater
AMR4FH1X01	41 mm

Produced by the MMSA Technical Information Department.

Copyright 1996
Mitsubishi Motor Sales of America, Inc.
All rights reserved